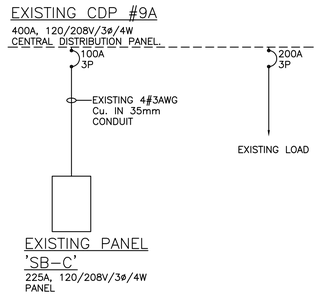


1 E1.2 E1.2 PARTIALEXISTING SINGLE LINE DISTRIBUTION DIAGRAM

N.T.S.

LIGHTING CONTROL SYSTEM SCHEMATIC DIAGRAM

SYSTEM DESCRIPTION

1. SUPPLY, INSTALL, WIRE AND CONNECT A COMPLETE "DISTRIBUTED INTELLIGENCE" AND DIGITALLY ADDRESSABLE LIGHTING CONTROL SYSTEM AS INDICATED ON DRAWINGS. REFER TO PARTS DESCRIPTION BELOW FOR LISTING OF ALL COMPONENTS.
2. INSTALL ENTIRE SYSTEM AS PER MANUFACTURER'S RECOMMENDATIONS AND CO-ORDINATE ALL WORK WITH OTHER TRADES.
3. SYSTEM TO CONSIST OF A LOW VOLTAGE MANUAL LIGHTING CONTROL WITHOUT THE USE OF ANY CENTRALLY HARDWIRED SWITCHING EQUIPMENT (RELAY PANELS). SYSTEM CONTROL TO BE EXECUTED BY DIRECTLY SWITCHING LIGHTING LOADS ON AND OFF AND/OR DIMMING OR VIA SOFTWARE INSTALLED ON A SINGLE HOST COMPUTER WITH THE ABILITY TO REMOTELY CONFIGURE AND MONITOR EVERY SYSTEM DEVICE. SYSTEM TO FORM A NETWORK UTILIZING CAT 5E LOW VOLTAGE CABLING WITH RJ45 CONNECTORS ON ALL DEVICES.

COMMON TERMINOLOGY

1. ZONE: A GROUP OF DEVICES IN A ROOM OR AREA THAT ARE DAISY-CHAINED WIRED TOGETHER WITH CAT-5(E) CABLING AND FUNCTION TOGETHER TO CONTROL THAT PARTICULAR SPACE'S LIGHTING. DEVICES CAN BE WIRED IN ANY ORDER. POWER FOR DEVICES AND COMMUNICATION MAY BE SUPPLIED LOCALLY FROM POWER/RELAY PACKS AND/OR POWER SUPPLIES.
2. POWER RELAY PACK: REMOTE MOUNTED RELAY/DIMMING MODULE SUPPLYING LOCAL CONTROL TO A LIGHTING ZONE.
3. GATEWAY: THE DEVICE IN A LIGHTING NETWORK THAT CONNECTS TO THE BUILDING'S ETHERNET (AND EVENTUALLY THE COMPUTER RUNNING THE SOFTWARE).
4. BRIDGE: A DEVICE USED AS A HUB FOR THE INTERCONNECTION OF MULTIPLE ZONES. BRIDGES CONNECT USING CAT5e TO CONNECT TO ZONES AND OTHER BRIDGES. BRIDGES TO BE CAPABLE OF POWERING DOWNSTREAM DEVICES SHOULD THEY NOT HAVE THEIR OWN POWER SUPPLY.

COMPONENT LIST

1. LIGHTING CONTROL SYSTEM TO INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING;
   1. NETWORK CONTROL GATEWAY TO BE C/W THREE (3) RJ45 PORTS FOR CONNECTION TO SYSTEM DEVICES AND ONE (1) RJ45 PORT FOR CONNECTION TO ETHERNET.
   2. POWER/RELAY PACKS TO BE C/W TWO (2) RJ45 PORTS. POWER/RELAY PACKS FOR SWITCHING OR DIMMING (3-WIRE) LOADS.
   3. WALL SWITCH FOR OVERRIDE ON/OFF CONTROL C/W TWO (2) RJ45 PORTS.
   4. FOUR SCENE WALL DIMMER FOR OVERRIDE AND ON/OFF/DIMMING CONTROL C/W TWO (2) RJ45 PORTS.
   5. ALL CAT5E CABLING TO BE ORANGE WITH RJ45 CONNECTORS, LENGTH TO SUIT RUNS. CABLING TO BE TERMINATED ON SITE.

INSTALLATION DETAILS

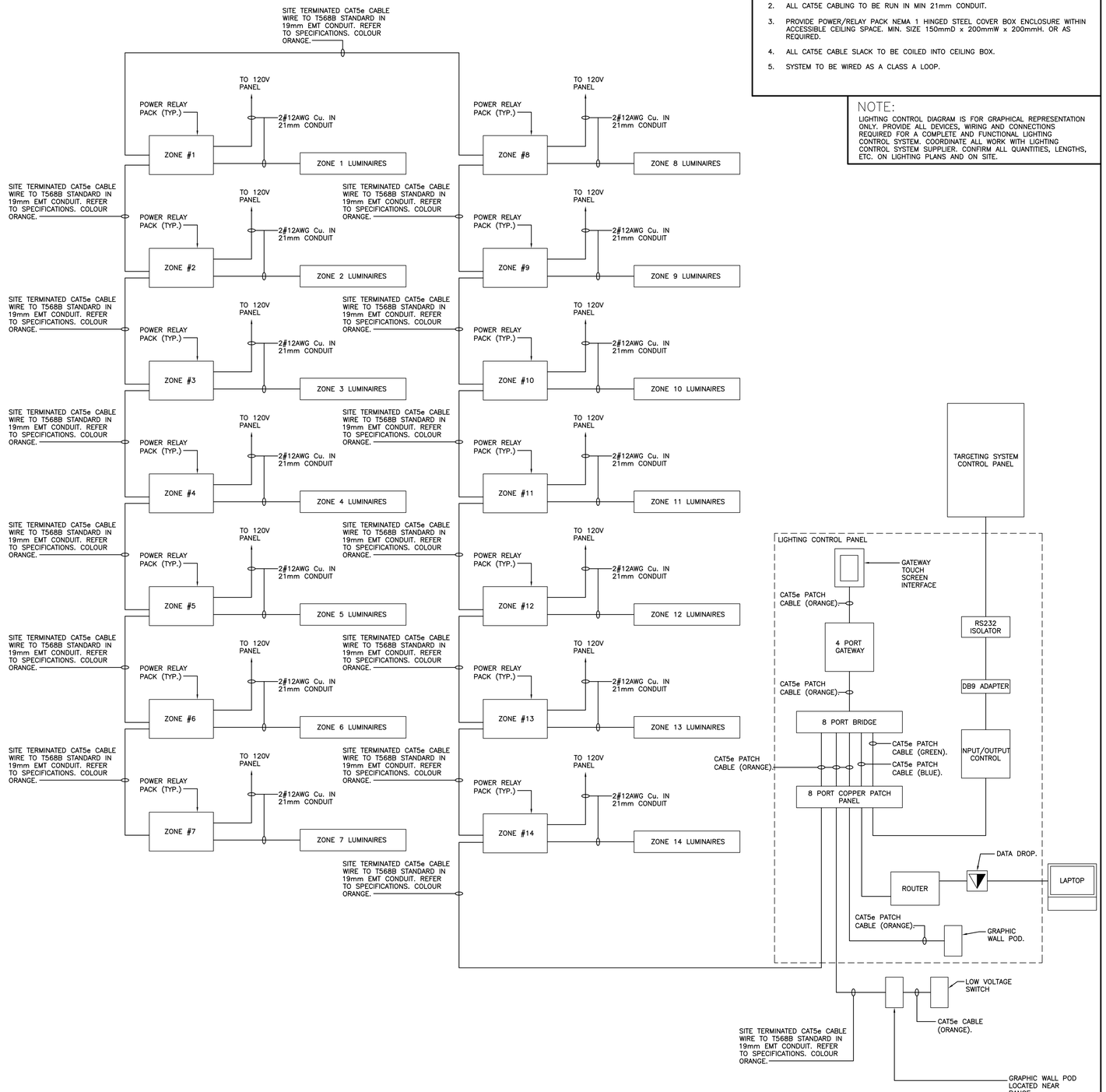
INSTALL ENTIRE SYSTEM AS PER MANUFACTURER'S RECOMMENDATIONS AND CO-ORDINATE ALL WORK WITH DEPARTMENTAL REPRESENTATIVE.

CONNECT POWER/RELAY PACKS BACK TO GAETWAY DEVICE.

1. PROVIDE 1 POWER/RELAY PACK (SWITCHED OR DIMMING AS REQUIRED) PER CIRCUIT.
2. ALL CAT5E CABLING TO BE RUN IN MIN 21mm CONDUIT.
3. PROVIDE POWER/RELAY PACK NEMA 1 HINGED STEEL COVER BOX ENCLOSURE WITHIN ACCESSIBLE CEILING SPACE. MIN. SIZE 150mmD x 200mmW x 200mmH. OR AS REQUIRED.
4. ALL CAT5E CABLE SLACK TO BE COILED INTO CEILING BOX.
5. SYSTEM TO BE WIRED AS A CLASS A LOOP.

NOTE:

LIGHTING CONTROL DIAGRAM IS FOR GRAPHICAL REPRESENTATION ONLY. PROVIDE ALL DEVICES, WIRING AND CONNECTIONS REQUIRED FOR A COMPLETE AND FUNCTIONAL LIGHTING CONTROL SYSTEM. COORDINATE ALL WORK WITH LIGHTING CONTROL SYSTEM SUPPLIER. CONFIRM ALL QUANTITIES, LENGTHS, ETC. ON LIGHTING PLANS AND ON SITE.



Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

REAL PROPERTY SERVICES
Western Region
SERVICES IMMOBILIERS
Région de l'ouest

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HUGO CEA CANAS
Member
22682
REGISTERED PROFESSIONAL ENGINEER

Revision	Description	Date
5		
4		
3		
2	ISSUED FOR CONSTRUCTION	FEB 23/15
1	ISSUED FOR 99% REVIEW	DEC 22/14
0	ISSUED FOR 50% REVIEW	OCT 20/14

Client: client

ROYAL CANADIAN MOUNTED POLICE D-DIVISION

1091 PORTAGE AVENUE WINNIPEG, MANITOBA

Project / Projet

WINNIPEG, MANITOBA
1091 PORTAGE AVENUE
D-DIVISION HEADQUARTERS

FIRING RANGE UPGRADE

Designed by / Conçu par: **HUGO CEA CANAS / PAUL LAPOINTE / KELLIE ORR**

Drawn by / Dessiné par: **PAUL LAPOINTE**

Approved by / Approuvé par: **HUGO CEA CANAS**

PWGSC Project Manager / Administrateur de Projets TPSGC: **PAUL DUCHARME**

Drawing title / Titre du dessin:

ELECTRICAL
LIGHTING CONTROL SYSTEM DETAIL AND PARTIAL EXISTING SINGLE LINE DISTRIBUTION DIAGRAM

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
	E1.2 OF XX	0